

**CLAIMS:**

I claim:

1. A method for automatically estimating the subjective quality of a signal carried over a transmission path and presented at a user interface comprising the steps of:
  - (a) at periodic intervals monitoring the transmission path used to carry said signal and at each of said monitoring intervals
  - (b) determining the values of one or more impairment factors and for each set of values so obtained estimating the effect that said impairment factors have on the subjective or perceptual quality of said signal and
  - (c) determining the estimated subjective quality of said signal by combining the estimated effects of each of said impairment factors and
  - (d) reducing the value of a counter if said combined estimated subjective quality is below the value of said counter or increasing the value of said counter if said combined estimated subjective quality is above the value of said counter.
2. A method as defined in claim 1 further characterized in that said signal is selected from the set of digitized voice, digitized audio and digitized video signal.
3. A method as defined in claim 1 further characterized in that one of said impairment factors is the response time between a request being sent from said user interface to a server and a response being received from said server.
4. A method as defined in claim 2 further characterized in that said increasing in value of said counter is performed in increments which are a function of the difference between said estimated subjective quality and the average value of said estimated subjective quality.
5. A method as defined in claim 3 further characterized in that said increasing in value of said counter is performed in increments which are a function of the difference between said estimated subjective quality and the average value of said estimated subjective quality.
6. A method for automatically estimating the subjective quality of a signal carried over a transmission path and presented at a user interface comprising the steps of:
  - (a) monitoring the transmission path used to carry said signal at periodic intervals and at each of said monitoring intervals determining the values of one or more transmission impairment factors and a time reference and storing said values and time references in sets for later processing
  - (b) retrieving said sets of stored values and for each set

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- (i) estimating the effect that each member of said set has on the subjective or perceptual quality of said signal and
  - (ii) determining the estimated subjective quality of said signal by combining the estimated effects of each member of said set and
  - (iii) reducing the value of a counter if said estimated subjective quality is below the value of said counter or increasing the value of said counter if said estimated subjective quality is above the value of said counter
7. A method as defined in claim 6 further characterized in that said signal is selected from the set of digitized voice, digitized audio and digitized video signal.
  8. A method as defined in claim 6 further characterized in that one of said impairment factors is the response time between a request being sent from said user interface to a server and a response being received from said server.
  9. A method as defined in claim 7 further characterized in that said increasing in value of said counter is performed in increments which are a function of the difference between said estimated subjective quality and the average value of said estimated subjective quality.
  10. A method as defined in claim 8 further characterized in that said increasing in value of said counter is performed in increments which are a function of the difference between said estimated subjective quality and the average value of said estimated subjective quality.
  11. A method for automatically estimating the subjective quality of a signal comprising the steps of:
    - (a) periodically monitoring the transmission path used to carry said signal and determining the values of one or more transmission impairment factors and for each set of values so obtained estimating the effect that said impairment factors have on the subjective or perceptual quality of said signal and
    - (b) determining the estimated subjective quality of said signal at each of said periodic monitoring times by combining the estimated effects of each of said impairment factors and
    - (a) multiplying each of said estimated subjective effects by a factor which is a function of the time difference between said monitoring time and a reference time for which a weighted total subjective quality is being determined and
    - (b) determining an estimated weighted total subjective quality by summing the set of said subjective quality estimates
  12. A method as defined in claim 11 further characterized in that said signal is selected from the set of digitized voice, digitized audio and digitized video signal

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13. A method as defined in claim 11 further characterized in that one of said impairment factors is the response time between a request being sent from said user interface to a server and a response being received from said server.

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